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Planning a Facility for the Handicapped

RMRS

MAMMOTH·LAKES CAMPGROUND

INYO National Forest

MAMMOTH LAKES CAMPGROUND FOR THE HANDICAPPED

This project was initiated by personnel of the Mammoth Ranger District of the Inyo National Forest in California. Although Mammoth Lakes is located some 300 miles north of Los Angeles, it is a popular recreational area for many who live in this large urban complex. And while there are some 1,000 campsites in this Mammoth Lakes area, there are many weeks during the summer season when all the campsites are taken.

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THE NEED FOR RECREATIONAL FACILITIES FOR THE HANDICAPPED

There are 18 million handicapped people in the United States. Often they lack the opportunity to participate in outdoor recreation because most facilities are not constructed to accommodate them. These individuals have the same right and need for recreation—and often more—than those with no handicap.

The need of the handicapped to be where the recreational "action is" is no different from that of the non-handicapped. The more *normal* the outdoor recreational experience is for the handicapped the better. Recreational areas in and around urban centers are where people go. The more distant attractions often associated with national forests, national parks and state parks are also attractive. It is no farther to any of these areas for the handicapped than it is for the non-handicapped since automotive transportation is usually used.

> Those who administer, design, and provide facilities for outdoor recreation should be aware that needs of the handicapped must be considered in the design and construction of all recreational facilities.

With this in mind, planners must decide either:

1. To construct integrated facilities to accommodate both handicapped and non-handicapped.

2. Or, to construct separate facilities for use by the handicapped with their families and by groups of handicapped people with their families or friends.

The second was chosen for the Mammoth Lakes Campground because: Having separate facilities for the handicapped, and administering them as such is the only way to assure space during the heavy use periods. In addition, raising funds for the project requires a special appeal to interested parties, and promoting a project "especially for the handicapped" has that appeal. To raise funds for "facilities for everyone including the handicapped" is more difficult.

FINANCING THE PROJECT

1. Your parent organization or agency.

2. Foundations often give limited support to many different worthy projects.

3. Fraternal orders such as the Lions Clubs, Elks Clubs, Rotary, etc. are likely sources of support for a project like this.

4. Commercial suppliers of basic building materials often will provide materials at cost which is often 50 to 70 percent of retail price. In purchasing materials and paying for equipment it may be best to purchase directly through the cooperative party to avoid the overhead expense of all funds deposited into the cooperative account. The Forest Service does not require an overhead assessment on a project like this. Check your own organizational policy.

5. Donations to a project like this can be declared tax deductible upon approval by the Internal Revenue Service. A letter of acknowledgment can be sent for any donations and serve as a record for tax purposes.

6. The Mammoth Lakes Campground was financed through a cooperative agreement with the Mammoth Lakes Lions Club which was the recipient of all funds donated to the project *Lions Campground For Handicapped.* Lions Clubs throughout California and western Nevada were contacted at a multiple district meeting and asked for their support.

CAMPGROUND DESIGN

The basic objective was to provide outdoor recreational opportunities for the handicapped by constructing a campground, fishing pier, and a nature trail. The design objectives were to construct facilities to accommodate the handicapped, but yet be similar to facilities used by the non-handicapped. The facilities had to be designed so the handicapped could use them with as little assistance as possible. The detailed design was coordinated with those who would use the facility, and plans for future expansion were included.

The campground has 16 single-family units, one double family unit, and three group camp units accommodating 35 to 40 people each. There are three four-unit flush toilets, six water faucets, central path system, and campsites adjacent to parking spurs. The paths, campsites, and parking spurs are hard-surfaced with soil cement.

The picnic tables and fireplaces are located on the hard-surfaced areas adjoining the parking spurs which allows easy maneuvering of wheelchairs. This also permits direct use of facilities next to a camper-trailer or camper-truck, or allows tents to be placed on the opposite side of the hard-surfaced area.

Wheelchairs are up to 26 inches in width. Add four extra inches for hand room on the wheels, and two wheelchairs require about 60 inches when side by side. Allowing an extra foot between two passing wheelchairs means a total of six feet for all pathways

The general layout of the camp units is a little more dense than usual to encourage more "getting together" by the people using the area. A vehicle barrier system is not required or used because of close administration, and of the obvious hazards to the handicapped (especially the blind). Regular picnic tables, fire grills, and restrooms are slightly modified to acommodate the handicapped safely. Water faucets are located along or near the hard-surfaced pathway. Most often each faucet will serve four to five units, as in other campgrounds.

The roadway is marked for 5 MPH, and is one-way. Parking areas at each group campsite are designed to accommodate four to six cars or a bus. A central path system provides ready access to other camp units, restrooms, the visitor center, the amphitheater for evening campfire programs, and to the nearby nature trail. Changes in the texture of the soil cement at turnoffs to the restrooms and paths is a good way to aid the blind.

Restrooms have necessary modifications including handrails, correct heights for toilets, sinks, mirrors, etc. Toilets are flush units. No shower facility is provided here but may be considered. There is also no electric power available here. Lighting for interior and entrance to restrooms is by propane lamps.

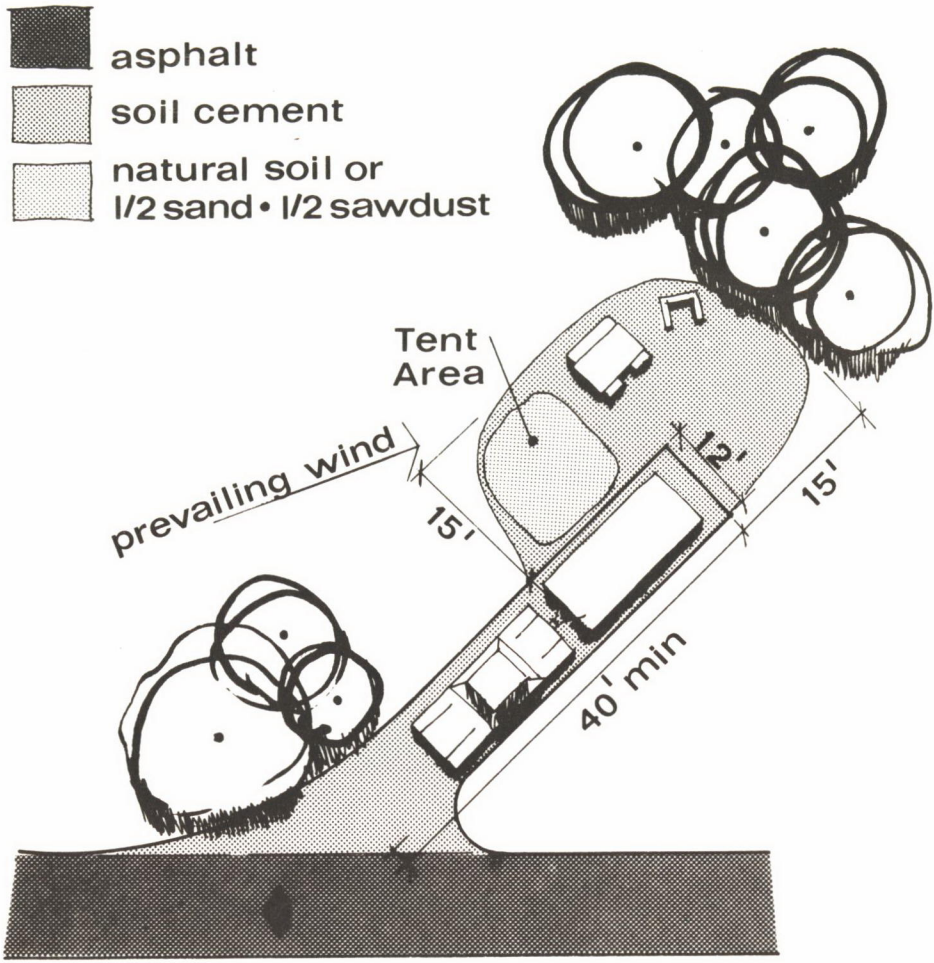
SINGLE FAMILY UNIT DESIGN

The design provides mobility from car to campsite on one continuous hard surface. The utility site (table and stove) plus extra room, is a minimum 14x16 feet and hard surfaced. Alongside the hard-surfaced area is a natural ground area (minimum 9x12 feet) that provides a soft and more absorbent sport for a tent. It should readily accept tent pegs, and absorb rain to protect occupants during a storm. If needed, a mulch of 50 percent sand and 50 percent sawdust can be applied two inches thick over the mineral soil

Each parking site is a minimum of 12 feet wide and 40 feet long. The average auto is six and a half feet wide so there is ample room to alight from an auto and into a wheelchair and still be on the hard surface. This 40-foot length will also accommodate a car with camper-trailer.

Some units have short four-foot spur paths connecting their camp unit with the main path systems.

All branches of trees were pruned to a height of seven feet above the ground. When hazardous to the blind, stumps and boulders were removed. Stoves were located downwind (prevailing wind direction) to help keep smoke away from the campsite.

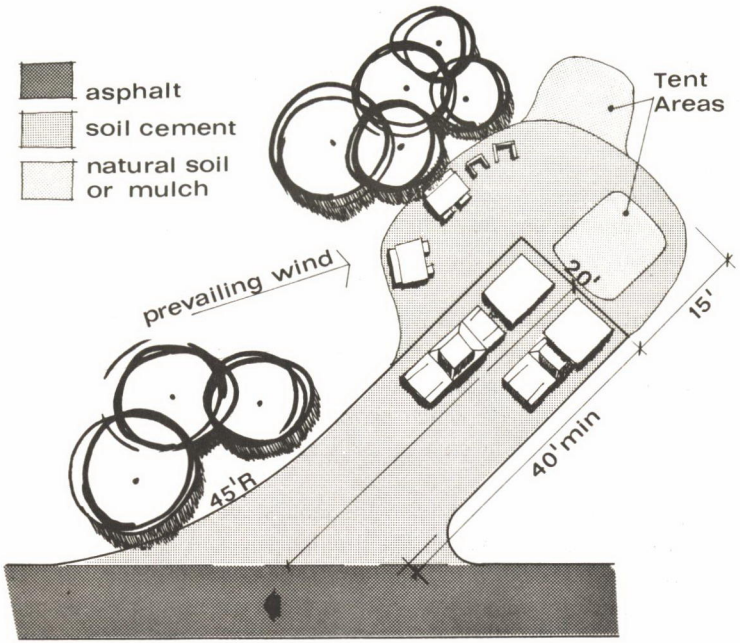


SINGLE FAMILY UNIT

DOUBLE-FAMILY UNIT DESIGN

Because of the increasing demand by many families wanting to camp together, the double-family unit was considered necessary. Heavy use indicates that more of these double-family units should have been constructed. Basically the unit is designed about the same as the single-family unit, except it is roughly twice as big. The two tables and two stoves were located together.

The two tents are separated to allow more privacy. All tent areas are mulched and a minimum of 9x12 feet.



DOUBLE FAMILY UNIT

GROUP UNIT DESIGN

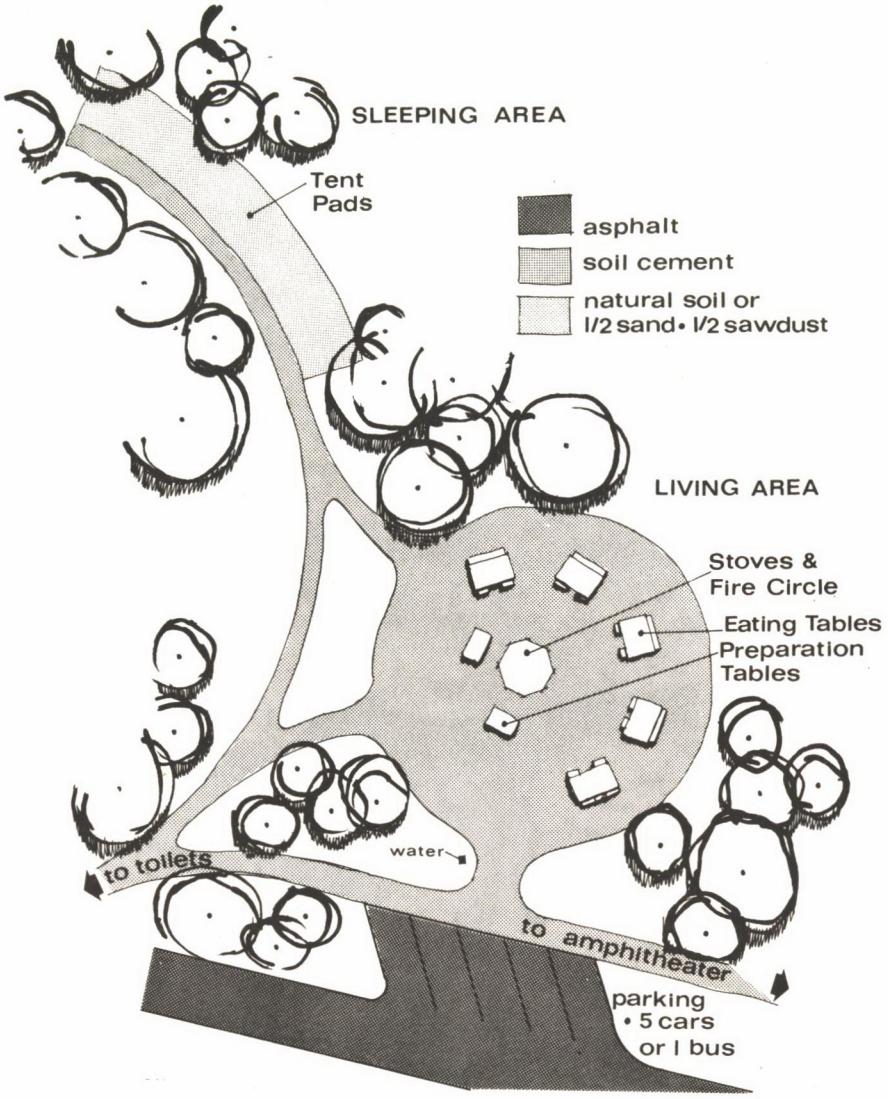
The hard-surfaced campsite area of 40x60 feet is joined to the parking area by a hard-surfaced path at least 10 feet wide. The objective is to be able to get out of a bus or auto and move to any of the facilities over a hard-surfaced pathway.

About six tables are placed at each site to accommodate at least 36 people. These tables have the center seat cut out on both sides to accommodate a total of 12 people in the group who might be in wheelchairs. If there are more, they can sit at the ends of the tables, so that any given table can accommodate up to eight people at a time, four of them in wheelchairs. The tables can be arranged in any way which allows ample room and yet does not take up all the hard-surfaced area.

The same type of pedestal stove is used here as in the rest of the campground. There are normally six stoves at each group campsite so as many visitors as possible can cook their own meals. Stoves should be downwind of tables, and can be arranged in any fashion which permits ample room for wheelchairs to move around without being in each others way.

The sleeping area should be apart from the table-stove area not only to separate it, but to minimize impact on the site. Moreover, it is aesthetically desirable to have two smaller areas than one large one. The sleeping area is a minimum of 16x80 feet, and has a hard-surfaced pathway four feet wide running along one side. This leaves room for four or five tents 12 feet wide and up to 16 feet long. The tent area is of natural soil or can be mulched with sand and sawdust to accommodate tent pegs and absorb rain.

Each group camp unit has a water faucet nearby and adjacent to the pathway, and it also has a central fire circle. The main path system to the amphitheater goes by each unit.



GROUP UNIT
(25-30 people)

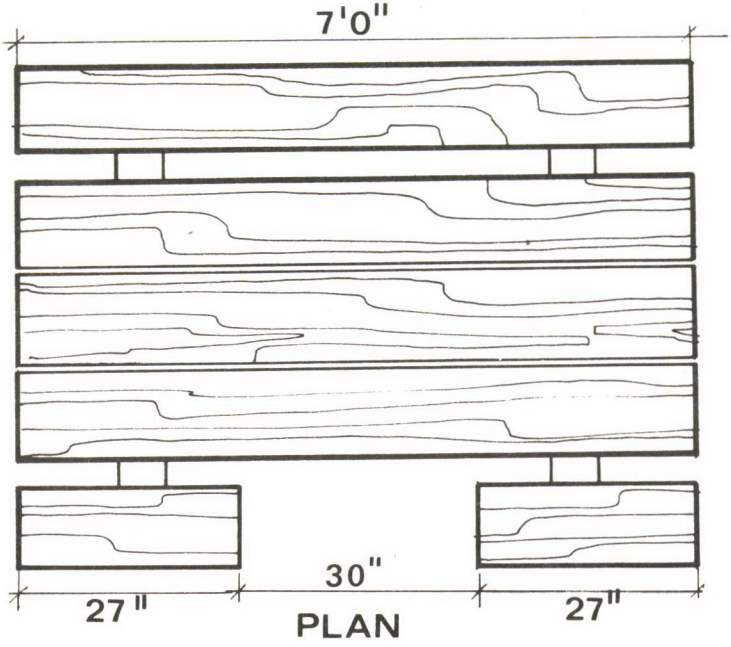
Nature Trail
to
Shady Rest CG &
Mammoth Village
to Mammoth Amphitheater
25

MAMMOTH LAKES
CAMPGROUND FOR
THE HANDICAPPED

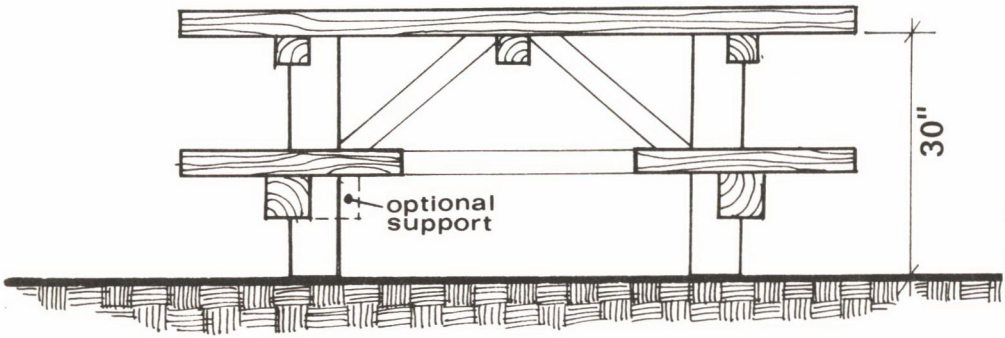
TABLE DESIGN

The table is similar to those commonly used in National Forest recreation areas, but was modified by raising the height to allow about 30 inches between the ground and the bottom of the table so the arms of the wheelchair can fit underneath. In addition, a section was cut out of the seat to allow a person to wheel right up to the table. (The seat for the family camp unit is cut out on only side on the assumption that most families would have only one person in a wheelchair. In the group unit, sections were removed on both sides of the table.) The removal of the center of the seat enables the handicapped person to be in the center of the group at meal time, and also provides flexibility in the event the handicapped person cannot feed himself. If there are two or more persons in wheelchairs at the same table, it is possible to sit at either end of the table.

The single seats, on each side of the wheelchair occupant, must be secured carefully so they will not become loose. If they do, however, a block can be inserted underneath the seat for added support.



PLAN



SIDE ELEVATION

MODIFIED HEAVY PLANK TABLE

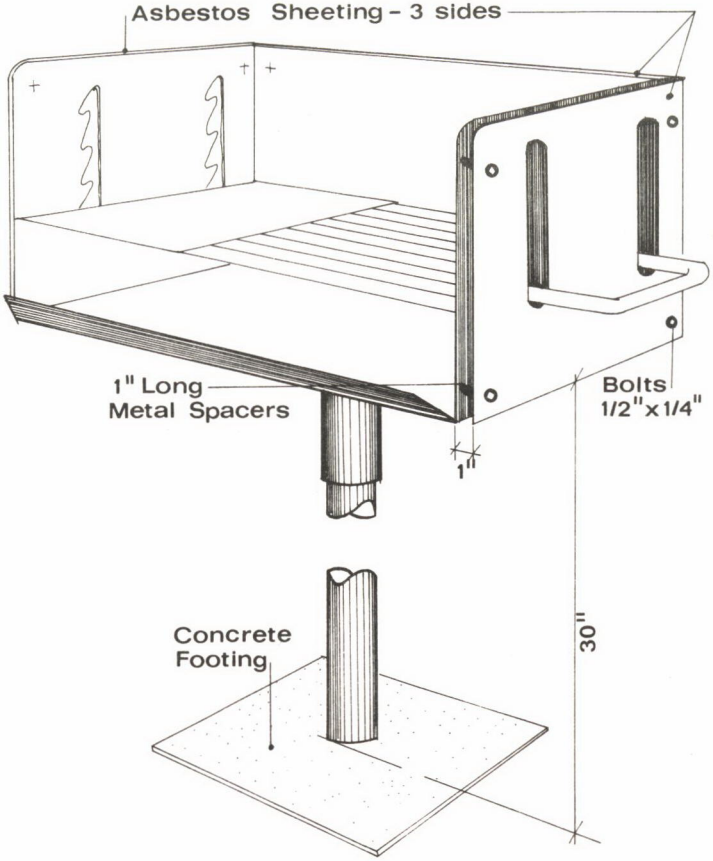
U.S.F.S. – II–B

STOVE DESIGN

This pedestal-type stove is commonly used in National Forest recreation areas. It can accommodate handicapped people well, especially those in wheelchairs and those who cannot bend over easily. It is 30 inches above the ground which helps keep small children out of danger. Moreover, the stove swivels 360 degrees which minimizes movement needed to tend it.

The unit is economical and, at a retail cost of less than $30, can fit into most budgets. The firebox can accommodate either charcoal or small pieces of wood.

This stove would probably be better if it had eight-inch wings on each side of the grill. This may be a needed modification for use by handicapped people. The firebox gets hot, and to help avoid accidents an exterior lining of asbestos sheeting was placed about one inch outside the firebox wall. (we have yet to know how the asbestos sheeting will hold up under snow and winter weather.)



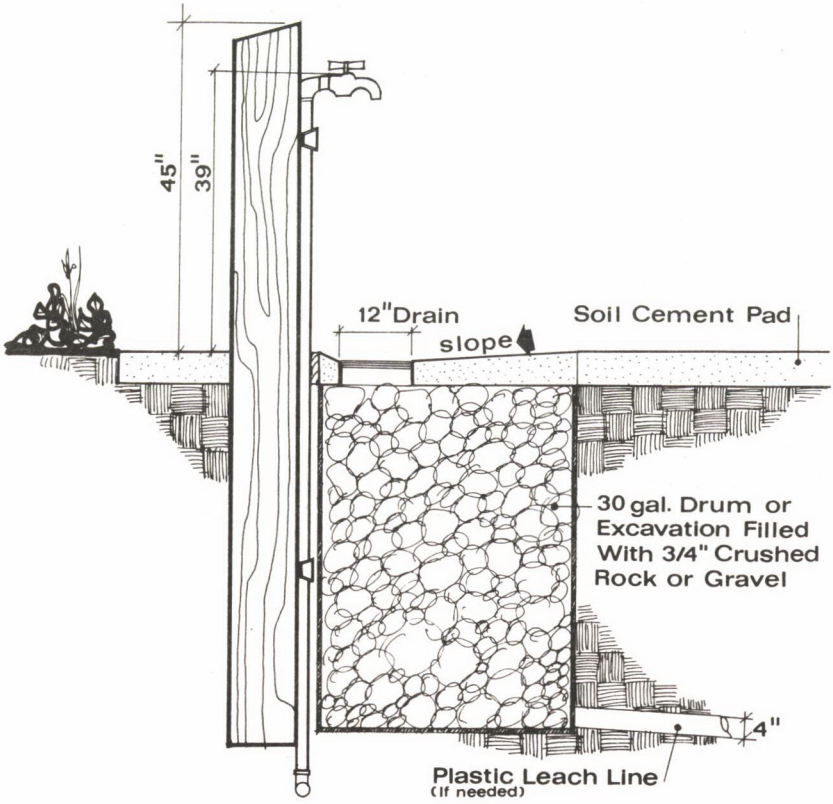
MODIFIED STOVE
Belson Charwood Grill

WATER FAUCET DESIGN

A regular faucet is used which permits easy filling of pots and buckets. Some people may not be able to hold a spring-loaded faucet long enough to fill a bucket.

A 12-inch drain under the faucet insures good drainoff and helps to keep people from getting splashed when near the faucet.

Hard-surfaced soil cement around the drain and slightly sloping toward it provides a continuous area of mobility from pathway to faucet, and also causes the excess water to drain, keeping the area from becoming muddy.



MODIFIED WATER HYDRANT

U.S.F.S.-R-5-5/63

no scale

TOILET DESIGN

Two Unit Vault

Modifications of the standard two-unit toilet plan BY111 include a front screen to allow a simpler approach to the door, and hanging the doors so they open at an angle opposite that of the front screen to prohibit a direct view into the restroom. (Doors are three feet wide with a two-way swing.) Entrances are at ground level. (Prefabricated walls and roof sections were installed over a cement slab floor. The soil cement approach path is level with the restroom floor.) In addition, the new fiberglass five-foot diameter cylinder vault six feet high was installed under the center of the building to serve both restrooms.

For planning purposes, an adult's wheelchair is 26 inches wide and 40 inches long. To use a toilet stool from either side would require at least 60 inches plus 18 inches for stool width, and a slight allowance for grab bars. To accommodate this, each room should be eight feet long and seven feet wide (interior dimensions), or a total of eight feet deep and 14 feet wide, (interior dimensions), for the "both sex" restrooms.

A minimum of eight by six feet should be allowed in which to turn a wheelchair, get out of the wheelchair onto the stool, and to use the wash basin if installed while also allowing room for the swinging door. (A person can turn his wheelchair around in a circle roughly four feet across.) A handrail installed by the toilet stool helps a person move from wheelchair to stool. Paper holders should be installed on both sides of stool.

Four Unit Flush R5 BY68

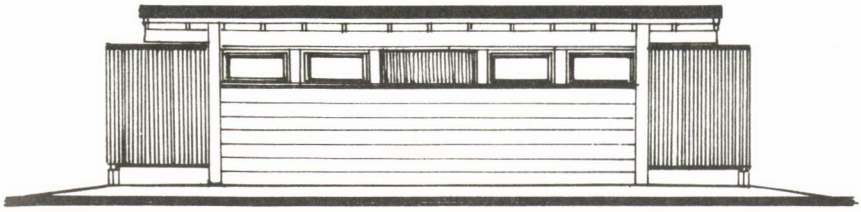
Due to the unusual toilet habits of some handicapped people, more privacy was planned than usual. Instead of one large room having two wash basins and two toilets, and interior wall was constructed to form two separate rooms with a wash basin and toilet in each. The height of the bottom wash basin is 30 inches above the floor. A small hand-hold for support was placed on the wash basin, or on the wall near the basin, for those who use crutches or have balance problems. As in most other campground restrooms, only cold water is provided. A hand rail installed by the toilet stool helps a person move from wheelchair to stool. Paper holders should be installed on both sides of the stool.

Mirrors are installed over the wash basins as usual, but are tipped forward slightly to permit use by a person in a wheelchair.

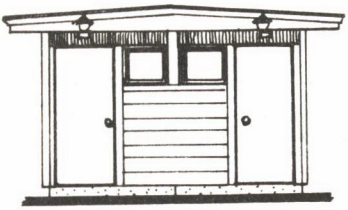
Doors are standard three-foot doors which provide at least 32 inches clearance after allowing for door jams, hinges, etc. Regular "easy-to-open" door knobs are satisfactory, but two-way swinging doors are recommended. It should be possible to lock them when in use, or at end of the season.

Lights are desirable both in and outside the toilet. If electric power is not available, gas lights will do the job.

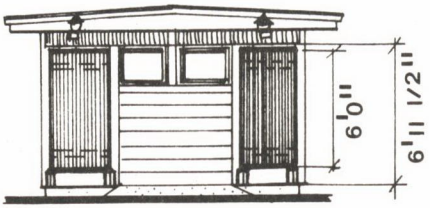
The need for ramps can be eliminated by constructing the restroom floor at ground level. To indicate to the blind an approach to a restroom, change path texture, and have this hard-surfaced path lead to the ground level restroom.



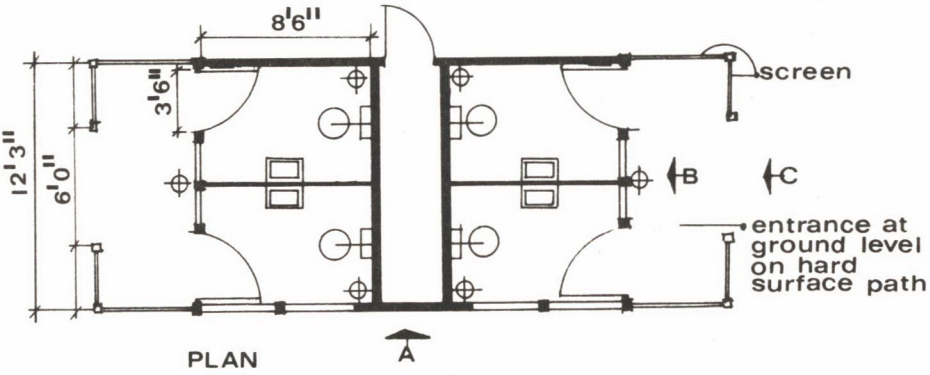
ELEVATION A



ELEVATION B



ELEVATION C



PLAN

MODIFIED 4-UNIT FLUSH TOILET BY-68

CAMPGROUND ADMINISTRATION

Use of the campground is by reservation only. Reservations can be made by mail or upon arrival at the campground if there are vacancies. Due to the exceptionally high demand for campsites, only families or groups having handicapped people as members are permitted. Campsites would seldom be available for use by the handicapped and their families if these restrictions were not enforced. The campground is adjacent to an existing campground that is administered by a caretaker seven days a week during the season. The regular charge system is used.

FISHING FLOAT DESIGN

This fishing pier consists of a ramp six feet wide and 60 feet long which extends out to a "float" 12'x24' supported by styrofoam pontoons. This is one of the better dock systems. Fluctuations of water are no problem, and the ramp and float can be removed from the water each fall to prevent winter damage. Moreover, it appears that the styrofoam pontoons will last longer than the large styrofoam blocks used in some floats.

There is a handrail on both sides of the ramp and all around the float. The decking of the ramp and float are of non-slip material and also of a type which will not give problems with narrow wheels of a wheelchair, cane tip, crutch tip, or a woman's heels.

The float will accommodate seven wheelchairs, four ambulatory cases and six or eight supervisory people. At a central location to both the fishing float and the picnic site is a two-unit vault toilet which has the necessary modifications.

The float provides space adequate for the anticipated use, but as needed the float can be enlarged by adding sections. The handrail is a double-strand pipe rail. One strand is two feet above the deck, and the other is at four feet. This should prevent anyone from falling into the water, and yet be low enough to cast over it. Benches are provided on the float for handicapped people to rest while fishing.

An umbrella or partial roof structure will be provided over the peir at a later date to protect people from sun or wind.

Parking is provided for two buses and six cars. From the parking area a hard-surfaced pathway, with proper grade, leads to the shoreline of the lake. Adjacent to the path and overlooking the lake are six picnic tables and grills to accommodate a group of 30, or six families. Hard surfaces and proper grade are maintained around each picnic site to allow easy mobility of wheelchairs. The hard-surfaced path continues to the shoreline and the ramp of the fishing float. A two-unit vault "either sex" toilet and a water faucet are located near the picnic site.

Fishing Float Administration - No charge is made at present for the use of the float. Use of the fishing pier is restricted to handicapped people, their families, and guests.

HIGHLIGHTS OF THE NATURE TRAIL

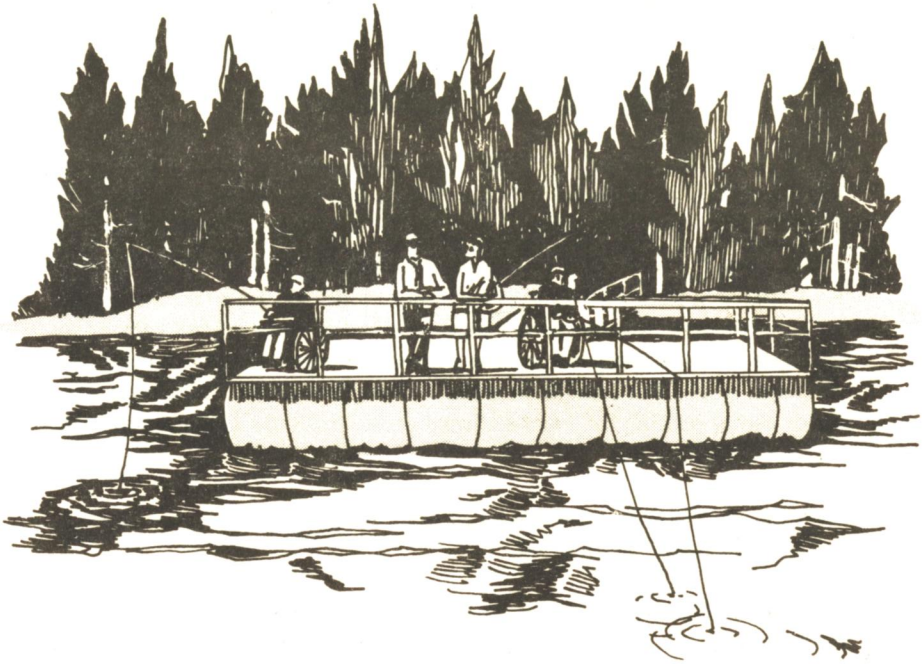
The nature trail is located adjacent to the Mammoth Visitor Center and about 350 yards from the Mammoth Lakes Campground for the handicapped. The flowers, trees, shrubs, wildlife, geology, and other points of interest are interpreted along the trail. This is not a special, separate trail for the handicapped, but a regularly planned trail with necessary modifications to accommodate the handicapped. These include a hard-surfaced pathway of soil cement six feet wide, and the avoidance of sharp turns and edges. In addition there are minimum grades and changes in grade. Parking is available in the adjacent visitor center parking lot. Hard-surfaced access from the campground to the nature trail is provided.

Restroom facilities are available to users of the nature trail at the visitor center or adjacent campground.

Since research showed that only some seven percent of the blind can read Braille, the nature trail has 11 stations where tape recorded messages can be heard. As the visitor approaches a station, pebbles imbedded in the trail give the path a different texture which extends about 30 inches and is the full width of the path. This texture changes indicates that a rope is located between two posts along the right-hand edge of the path. On the second post there is a button which activates the recorded message.

Since this trail is in snow country, the ropes and most of the recording equipment are removed during the winter to prevent damage.

Nature Trail Administration - No special administration is needed for the nature trail. This trail was designed by modifying a planned nature trail to accommodate the handicapped. The trail is open to all, and no restrictions are planned for use of this trail by the general public.



AGRICULTURE—FOREST SERVICE—SAN FRANCISCO